

Application Support for Agilent Logic Analyzers

Configuration Guide

May 1, 2005

Configuring a logic analyzer for your specific application is as easy as one, two, three. To configure a system select the combination of products and capabilities that will

1 connect

Create the physical and electrical connection between the logic analyzer and your device under test.

2 acquire

Provide accurate and reliable measurements, with power to cover future technology trends.

3 view & analyze

Consolidate large amounts of data rapidly into displays that provide insight into your system's behavior in a format you understand.

Use information in each of the sections listed to help you configure a system that will meet your specific measurement needs.

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2 acquire

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3 view & analyze

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Agilent Technologies

Agilent Logic Analyzer Family Selection Guide

Applications

	1680 Series Standalone 1690 Series PC-Hosted	16903A	16900A 16902A
Timing and State Analysis	✓	✓	✓
FPGA Debug and Validation	✓	✓	✓
Multiple-Processor/Bus Analysis	✓	✓	✓
Real-Time Instruction Trace Analysis	✓	✓	✓
Hardware/Software Integration	✓	✓	✓
Source Code Debug	✓	✓	✓
Analog Signal Analysis (time correlation to and scope waveform import from external scope)	✓	✓	✓
Digital Signal Quality Analysis <i>Eye Scan</i>	✓	✓	✓
Digital Stimulus and Control		✓	✓
Channels per System	34, 68, 102, or 136	Up to 306	> 306

Logic Analysis System Selection

	1680 Series Standalone 1690 Series PC-Hosted	16903A	16900A 16902A
Operating System	Windows XP Professional	Windows XP Professional	Windows XP Professional
Remote Control with Microsoft COM or ASCII RPI	Yes	Yes	Yes
Operate in Hosted Power Mode	Yes	Yes	Yes
Compatible with Offline Analysis	Yes	Yes	Yes
Standard Data Views	Waveform (with scope waveform import and chart), Listing, Compare, Source Code, Eye Scan	Waveform (with scope waveform import and chart), Listing, Compare, Source Code, Eye Scan	Waveform (with scope waveform import and chart), Listing, Compare, Source Code, Eye Scan
Modular Mainframe	No	Yes	Yes
Number of Module Slots	Integrated acquisition hardware	3	6
Multiframe Pro	No	No	Yes
Internal Display Resolution	800 x 600	800 x 600	16902A: 800 x 600 16900A: Uses external display
Touch Screen	No	Yes	16902A: Yes 16900A: No
External Display Resolution	1024 x 768	1600 x 1200	1600 x 1200
Number of External Displays	1	Up to 4 (with PCI video card)	Up to 4 (with PCI video card)
PCI Card Slots	1680 Series: 2 full profile 1690 Series: 0	1 full profile, 1 low profile	1 full profile, 1 low profile

Agilent Logic Analyzer Family Selection Guide

Logic Analyzer Selection

	1680 Series Standalone 1690 Series PC-Hosted	16910A / 16911A	16950A	16760A
Channels per module	34, 68, 102, 136	102 / 68	68	34
Max Channels on a Single Timebase and Trigger	136	16910A: 510 16911A: 340	340	170
4 GHz Timing Zoom Timing (All Channels, All the Time)	No	Yes	Yes	No
Max Timing Sample Rate (Half/Full Channels)	800 MHz (1.25 ns) / 400 MHz (2.5 ns)	1.0 GHz (1.0 ns) / 500 MHz (2.0 ns)	1.2 GHz (833 ps) / 600 MHz (1.67 ns)	800 MHz (1.25 ns)
Max State Clock Rate	200 MHz	450 MHz with option 500, 250 MHz with option 250	600 MHz	800 MHz
Max State Data Rate	200 Mb/s	500 Mb/s with option 500, 250 Mb/s with option 250	800 Mb/s	1.5 Gb/s
Memory Depth	512 K and 2 M	256 K up to 32 M	256 K up to 64 M	64 M
Supported Signal Types	Single-ended	Single-ended	Single-ended and differential	Single-ended and differential
Eye Finder Capability	Yes	Yes	Yes	Yes
Eye Scan Capability	Yes	Yes	Yes	Yes
Probe Compatibility	40-pin cable connector	40-pin cable connector	90-pin cable connector	90-pin cable connector

Note: Probes are ordered separately. Specify probes when ordering to ensure correct connection between your logic analyzer and the device under test. Order any combination and quantity of the compatible probes listed in the 'Connect' section.

Oscilloscopes

Agilent DSO 80000 Series, Infiniium 54800 Series, 6000 Series	
Oscilloscope Type	External
Maximum Bandwidth	13 GHz
Maximum Sampling Rate	40 GSa/s
Maximum Memory Depth	128 M
Channels/Oscilloscope	2 and 4
Maximum Number of Channels on a Single Time Base and Trigger	4

16720A Pattern Generator

Maximum Clock	300 MHz	180 MHz
Number of Data Channels per Module	24	48
Maximum Vector Width (5 Module System)	120 bits	240 bits
Memory Depth, in Vectors	16 M	8 M
"IF" Command	No	No

Connect ... With Accurate and Reliable Probes

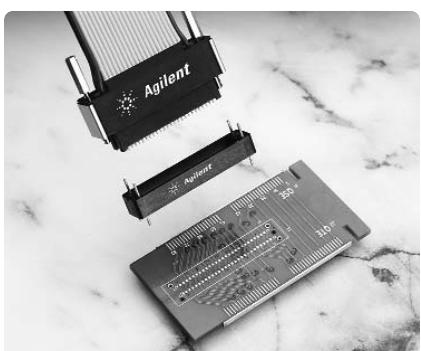
Accurate measurements start with reliable probing. Agilent Technologies offers a wide variety of probing accessories to support your measurement needs, making it easy to connect your Agilent logic analyzer to your designs.

Soft Touch Connectorless Probing

- Quick, easy, connection to many signals in the smallest footprint available without requiring a header designed into the target
- Proven technology for the most reliable connection
- No connector on the target
- Very low loading (<0.7 pF)
- Streamlines the design flow
- Simplifies signal routing
- Single-ended and differential capabilities



Signal Type	Maximum Data Rate	Minimum Signal Amplitude	Maximum Channels Supported	Equivalent Load Capacitance	Pad Footprint	Logic Analyzer Compatibility	Model Number
Differential or Single-Ended Clock, Differential or Single-Ended Data	> 2.5 Gb/s	Vmax-Vmin 200 mV	17	< 0.7 pF	Pro Series Soft Touch	90-pin cable connector	E5405A
Differential or Single-Ended Clock, Differential or Single-Ended Data	> 2.5 Gb/s	Vmax-Vmin 200 mV	17	< 0.7 pF	Soft Touch	90-pin cable connector	E5387A
Differential or Single-Ended Clock, Single-Ended Data	> 2.5 Gb/s	250 mV p-p	34	< 0.7 pF	Pro Series Soft Touch	90-pin cable connector	E5406A
Differential or Single-Ended Clock, Single-Ended Data	> 2.5 Gb/s	250 mV p-p	34	< 0.7 pF	Soft Touch	90-pin cable connector	E5390A
Differential or Single-Ended Clock, Single-Ended Data	> 2.5 Gb/s	500 mV p-p	17	< 0.7 pF	Half-size Soft Touch	90-pin cable connector	E5398A
Single-Ended Clock, Single-Ended Data	> 2.5 Gb/s	500 mV p-p	34	< 0.7 pF	Pro Series Soft Touch	40-pin cable connector	E5404A
Single-Ended Clock, Single-Ended Data	> 2.5 Gb/s	500 mV p-p	34	< 0.7 pF	Soft Touch	40-pin cable connector	E5394A
Single-Ended Clock, Single-Ended Data	> 2.5 Gb/s	500 mV p-p	17	< 0.7 pF	Half-size Soft Touch	40-pin cable connector	E5396A



Each soft touch probe is supplied with a kit of five retention modules. Extra retention modules can be ordered using the following:

Agilent Part Number Description

E5403A	Pro Series Soft Touch Retention Modules Kit of five retention modules for E5404A, E5405A, E5406A
E5387-68701	Soft Touch Retention Modules Kit of five retention modules for E5387A, E5390A or E5394A
E5396-68702	Half-Size Soft Touch Retention Modules Kit of five retention modules for E5396A or E5398A
N4221-68702	Kit of five retention modules for PCI Express
N4228-68702	Kit of five half-size retention modules for PCI Express

Connector Probing

- Quick connection to many signals in a small footprint, connector is designed into target
- Low loading
- Single-ended and differential capabilities

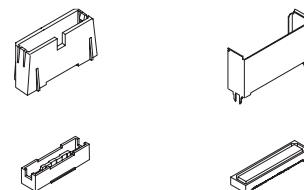
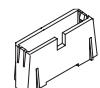


Signal Type	Maximum Data Rate	Minimum Signal Amplitude	Maximum Channels Supported	Equivalent Load Capacitance	Logic Analyzer Compatibility	Model Number
Differential or Single-Ended Clock, Differential or Single-Ended Data	1.5 Gb/s	Vmax-Vmin 200 mV	17	1.5 pF	90-pin cable connector	E5379A (100-pin Samtec)
Differential or Single-Ended Clock, Single-Ended Data	1.5 Gb/s	250 mV p-p	34	1.5 pF	90-pin cable connector	E5378A (100-pin Samtec)
Single-Ended Clock, Single-Ended Data	600 Mb/s	300 mV p-p	34	3 pF	90-pin cable connector	E5380A (38-pin Mictor)
Single-Ended Clock, Single-Ended Data	[1]	500 mV p-p	34	1.5 pF	40-pin cable connector	E5385A (100-pin Samtec)
	[1]	500 mV p-p	34	3 pF	40-pin cable connector	E5346A (38-pin Mictor)
	[1]	250mV p-p	34	3 pF	40-pin cable connector	E5339A (38-pin low-voltage Mictor)
	[1]	500 mV p-p	34	3 pF	40-pin cable connector	E5351A (38-pin unterminated Mictor)

[1] Equivalent to the data rate of the logic analyzer the probe is attached to.

Connectors for Designed In Probes

Agilent Part Number	Description
E5346-68701	38-pin Mictor connectors and shrouds (five each)
16760-68702	100-pin Samtec connectors and shrouds (five each)

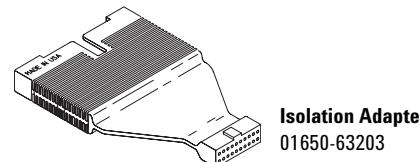


Mictor Connectors for 38-pin Probes
E5346-68701

Samtec Connectors for 100-pin Probes
16760-68702

Isolation Adapter

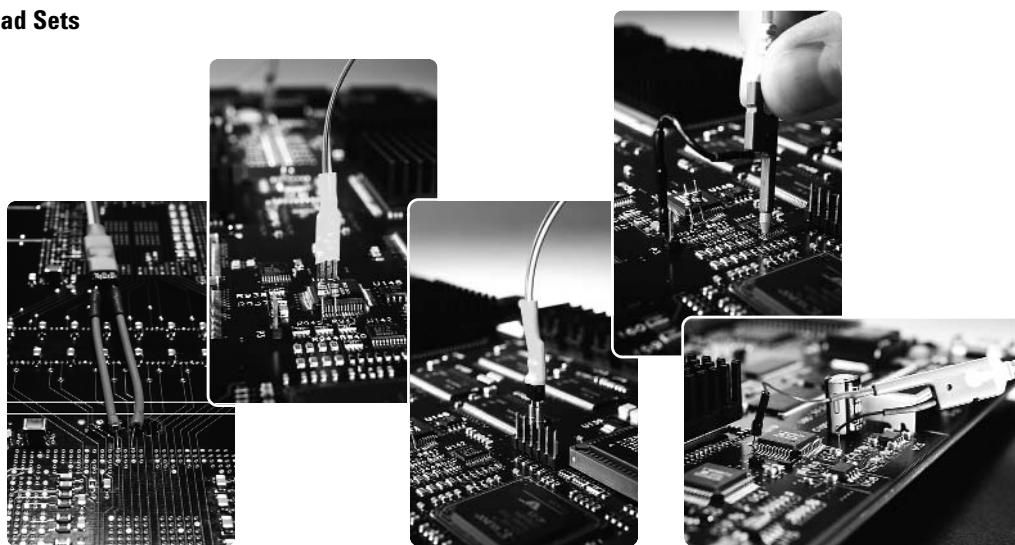
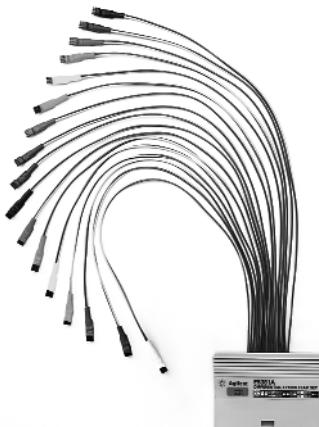
Agilent Part Number	Description
01650-63203	Isolation adapter for logic analyzers with 40-pin cable connectors (2x10 header on target)



Isolation Adapter
01650-63203

General Purpose Flying-Lead Sets

Flexible connection to individual signals.



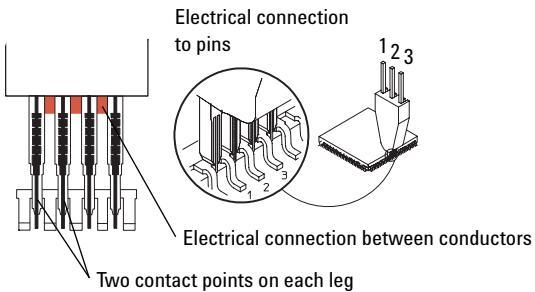
Signal Type	Maximum Data Rate	Minimum Signal Amplitude	Maximum Channels Supported	Equivalent Load Capacitance	Logic Analyzer Compatibility	Model Number
Differential or Single-Ended Clock, Differential or Single-Ended Data	1.5 Gb/s	Vmax-Vmin 200 mV	17	0.9 pF	90-pin cable connector	E5381A
Differential or Single-Ended Clock, Single-Ended Data	1.5 Gb/s	250 mV p-p	17	1.3 pF	90-pin cable connector	E5382A
Single-Ended Clock, Single-Ended Data	[1]	600 mV p-p	17	1.5 pF	40-pin cable connector	E5383A

[1] Equivalent to the data rate of the logic analyzer the probe is attached to.

The Agilent Technologies Wedge Probe Adapter

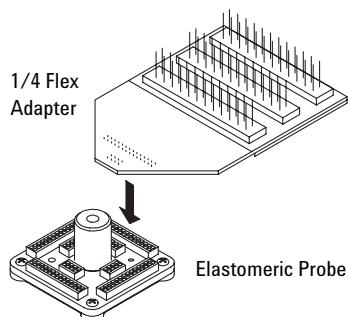
The Agilent wedge probe adapter provides mechanically sound, noninvasive connection to adjacent pins on TQFP and PQFP packages. Connect logic analyzer flying leads directly to the adapter; connect scope probes through a dual-head adapter.

Number of Signals	Pin Pitch	Model Number	Number of Agilent Wedges Included
3	0.5 mm	E2613A	1
3	0.5 mm	E2613B	2
8	0.5 mm	E2614A	1
16	0.5 mm	E2643A	1
3	0.65 mm	E2615A	1
3	0.65 mm	E2615B	2
8	0.65 mm	E2616A	1
16	0.65 mm	E2644A	1

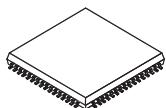


TQFP, PQFP Adapters

Agilent Technologies' state-of-the-art probe adapters offer a simple means of connecting to PQFP and TQFP packages with minimal "keep out" area. Agilent's reliable probes ensure trouble-free electrical and mechanical connection.



Package Adapter	Pin Pitch	Elastomeric Probe	1/4 Flex Adapter
144-Pin TQFP	0.5 mm	E5336A	E5340A
144-Pin PQFP/CQFP	0.65 mm	E5361A	E5340A
160-Pin QFP	0.5 mm	E5377A	E5349A
160-Pin PQFP/CQFP	0.65 mm	E5373A	E5349A
176-Pin TQFP	0.5 mm	E5348A	E5349A
208-Pin PQFP/CQFP	0.5 mm	E5374A	E5371A
240-Pin PQFP/CQFP	0.5 mm	E5363A	E5372A



Device Specific (Processor/Bus) Real-Time Trace Probes

Real-Time Trace Products

Device Specific: Processors, DSPs, Controllers, Busses, and Programmable Logic Devices

The following section lists the available processor and bus support products from Agilent

Technologies and complimentary vendors. Agilent and our partners provide an extensive range of quality tools that offer non-intrusive, full-speed, real-time analysis and processor execution control to accelerate your debugging process.

Steps to Determine Your Specific Measurement Needs

1. Determine if your device is supported

Device Information

Manufacturer or Architecture and Name	Adapter for Pin Count, Pkg Type or Design In	Max Bus Clk MHz

Devices are listed alpha-numerically, unless grouped by processor family (IBM, Intel, Motorola). The value in the 'Max Bus Clk MHz' column refers to the maximum supported bus speed for the processor, which in most cases is not the speed of the processor. Where you see "Design In" specified, please consult the solution provider's website for more information on how to design your logic analyzer connection to the device.

Contact Agilent Technologies if you do not see support for your specific device. A representative can:

- Determine if support is under development
- Recommend third parties that design custom solutions
- Direct you to information or consultants that can help you design a test solution.

Device Specific (Processor/Bus) Real-Time Trace Probes

2. Select the product(s) to meet your measurement needs

Product Information

Product Type	Min # Chns Req for Inv Assm, Max # Chns

The 'Product Information' section lists the available product types and logic analyzer channel requirements.

Inverse Assembler (Inv Assem) – software that converts a captured state trace into processor mnemonics

Includes	Inverse assembler software and logic analyzer configuration files
Provides	Converts real-time trace information into processor mnemonics
Requires	Method for connecting to the processor, typically either connectorless or connector probing, and appropriate logic analyzer channel count.

Analysis Probe (Anlys Prb) – formerly called preprocessors

Includes	Analysis probe hardware, logic analyzer configuration files, and inverse assembler (for analysis probes that support state mode)
Provides	Mechanical and electrical connection to the processor or bus, converts real-time trace into processor mnemonics

3. Verify logic analyzer compatibility

Supported Logic Analyzers

Offline Analysis	169XX	168X and 169X	167XX	1674X, 16750 / 1 / 2 (68 ch)	16753 / 4 / 5 / 6 (68 ch)	
	16910 (102 ch)	16911 (68 ch)	16950 (68 ch)	1680 / 90 (136 ch)	1681 / 91 (102 ch)	1682 / 92 (68 ch)

The 'Supported Logic Analyzers' section provides compatibility information between the processor and bus support products and currently shipping logic analyzers.

Use the minimum number of channels required ('Min # Chns Req') from the Product Information section to determine compatibility with a given logic analyzer. The minimum number of channels refers to the number of channels needed by the inverse assembler to interpret the captured data and display processor mnemonics. The

maximum number of channels provides access to additional signals that could be useful during system debug.

For 169XX or 167XX measurement modules, a number represents the number of modules required to support the minimum channel requirements.

For 1680 and 1690 series Standalone and PC-hosted logic analyzers, a check mark signifies the analyzer has enough built-in acquisition channels to meet the minimum channel requirements.

Processor, DSP and FPGA Solutions for Agilent Logic Analyzers

Actel FPGA

ACT1010/1020 84-PGA Anlys Prb^[5] ————— Contact Agilent ————— C: LACT-1010/PGA84
 ACT1280 176-PGA All Anlys Prb^[5] ————— ————— 2 C: LACT-1280/PGA176, 9^[2]

Altera EPLD

EPM5128 68-PGA All Anlys Prb^[5] -, 68 ————— Contact Agilent ————— C: LMAX-5000/PGA68, 4^[2]
 EPM5192-P 84-PGA All Anlys Prb^[5] -, 85 ————— Contact Agilent ————— 2 C: LMAX-5000/PGA84, 5^[2]

AMCC

See IBM

AMD

186EM/ES	PQFP	40	Anlys Prb	68, 136	— Contact Agilent —	1	C: PI-AM186EM/ES-P, 4 ^[2] AR: CRL-60054, 4 ^[2]
	TQFP	40	Anlys Prb	68, 136	— Contact Agilent —	1	C: PI-AM186EM/ES-T, 4 ^[2]
186CC	PQFP	All	Anlys Prb	68, 68	— Contact Agilent —	1	C: PI-AM186CC, 4 ^[2]
188EM/ES	PQFP	40	Anlys Prb	68, 136	— Contact Agilent —	1	C: PI-AM188EM/ES-P, 4 ^[2]
	TQFP	40	Anlys Prb	68, 136	— Contact Agilent —	1	C: PI-AM188EM/ES-T, 4 ^[2]

Analog Devices

ADSP2100/2101 — Inv Assm^[3] 51, — Contact Agilent

Aptix

AX1024D FPIC PGA All Anlys Prb^[5] –, 68 Aptix

ARM

AT&T

92010 (Hobbit) PQFP All Anlys Prb 102, 102 2 C: PI-ATT92010, 6^[2]

Dallas

80C320	DIP	8	Anlys Prb	34, 51	1	ET: HP-C320-DIP-PAS, 2 ^[2]
	PLCC	8	Anlys Prb	34, 51	1	ET: HP-C320-PLCC-PAS, 2 ^[2]
	PLCC	8	Anlys Prb	34, 51	1	ET: HP-C320-PLCC-PAS-AC, 2 ^[2]
	PQFP	8	Anlys Prb	34, 51	1	ET: HP-C320-PQFP-PAS/S, 2 ^[2]

[1] Requires E5380A to work with
16753/54/55/56 and 16950A

[2] Qty isolation adapters (P/N 01650-63203)

[3] Supports state/protocol only

[4] Qty Mictor isolation adapters, (P/N E5346A for logic analyzers with 40-pin cables, E5380A for logic analyzers with 90-pin cables)

[5] Supports timing mode only

[6] Contact vendor for detailed information

Processor, DSP and FPGA Solutions for Agilent Logic Analyzers

DEC

See 'Intel Other' for Strong ARM products

Freescale Mobile Extreme Convergence (MXC) Platform

Starcore 140 Nexus	Design In	Decoder &	✓ — See note	A: E9522A-010	
		Inv Assm	✓ — See note	A: E9522A-020	
Note: Minimum of 16, 32 or 48 channels based on Nexus port width. Select 1680, 1690 or 16900 Series logic analyzer with speeds compatible with MCK0 and channel count for ETM port width.					
MXC Memory	Design In	Decoder	✓ — See note	A: E9523A-020	
		Memory Bus	✓ — See note	A: E9523A-010	
Note: Select 1680, 1690 or 16900 Series logic analyzer. Compatibility depends on memory controller and memory widths used. See design guide for details.					
Note: Select either node locked license (E9523A-010) or floating license (E9523A-020).					

GTE

65816 — All Inv Assm^[3] 51, 51 — Contact Agilent 1 Contact Agilent

IBM PowerPC 4XX Family

PowerPC 405GP/CR, Design In All Inv Assm 102,102 ✓ 1 2 2^[1] ✓ ✓ 2 2^[1] A: E9618A-001
405L, H, PM, PS, GPr, Note: Requires access to and provides inverse assembly for the peripheral bus. Does not provide IA for the SDRAM bus.
405A3, B3, C3, D3, A4,
B4, C4, D4, E4, F4

IBM PowerPC 6XX Family

IBM PowerPC 7XX Family

[1] Requires E5380A to work with
16753/54/55/56 and 16950A

[2] Qty isolation adapters (P/N 01650-63203)

- [2] Qty Isolation adapters (1 / N to 1)
- [3] Supports state/protocol only

[4] Qty Mictor isolation adapters, (P/N E5346A for logic analyzers with 40-pin cables, E5380A for logic analyzers with 90-pin cables)

[5] Supports timing mode only

- [5] Supports timing mode only
- [6] Contact vendor for detailed information

Processor, DSP and FPGA Solutions for Agilent Logic Analyzers

Device Information			Product Information		Supported Logic Analyzers				Order Information	
Manufacturer or Architecture and Name	Adapter for Pin Count, Pkg Type or Design In	Max Bus Clk MHz	Product Type	Min # Chns Req for Inv Assm, Max # Chns	169XX	168X and 169X	167XX	167XX, 16750/1/2, 16753/4/5/6 (68 ch)	Agilent or Third Party Product Number	
					16910 (102 ch)	16911 (68 ch)	16950 (68 ch)	1680/90 (136 ch) 1681/91 (102 ch) 1682/92 (68 ch) 1683/93 (34 ch)	16753/4/5/6 (68 ch)	A: Agilent AR: Agilent Resale AD: ALD C: Corelis ET: Emulation Technologies F: Future Plus IE: Ironwood Electronics

IDT

R3041	PLCC	50	Anlys Prb	85, 102	—	—	Contact Agilent	2	C: PI-R3041, 5 ^[2]
R3051/52/81/82	PLCC	50	Anlys Prb	85, 102	—	—	Contact Agilent	2	C: PI-R30XX, 5 ^[2]
R4600/4700	PGA MQUAD	All	Anlys Prb	102, 119	—	—	Contact Agilent	2	C: PI-4700-P, 6 ^[2]
R4600/4700	PGA MQUAD	All	Anlys Prb	102, 119	—	—	Contact Agilent	2	C: PI-4700-Q, 6 ^[2]
R4640	128-PQFP	All	Anlys Prb	68, 68	—	—	Contact Agilent	1	C: PI-4640, 4 ^[2]
R4640	128-PQFP	All	Anlys Prb	68, 68	—	—	Contact Agilent	1	AR: CRL-60038, 4 ^[2]
R4650	MQUAD	All	Anlys Prb	102, 119	—	—	Contact Agilent	2	C: PI-4650, 6 ^[2]
R5000	PGA	All	Anlys Prb	102, 153	—	—	Contact Agilent	2	C: PI-R5000, 6 ^[2]
R36100	MQUAD	33	Anlys Prb	102, 204	—	—	Contact Agilent	2	C: PI-36100, 6 ^[2]
RC32332	PQFP	All	Anlys Prb	102, 238	—	—	Contact Agilent	2	C: PI-RC32332, 2 ^[4]
RC32334	BGA	All	Anlys Prb	102, 238	—	—	Contact Agilent	2	C: PI-RC32334, 2 ^[4]
RC32355	208-PQFP	All	Anlys Prb	102, 238	—	—	Contact Agilent	2	C: PI-RC32355, 3 ^[4]
RC32364	TQFP	67	Anlys Prb	85, 119	—	—	Contact Agilent	2	C: PI-RC32364, 5 ^[2]
RC32364	TQFP	67	Anlys Prb	85, 119	—	—	Contact Agilent	2	AR: CRL-60079, 5 ^[2]
RC64474, RC64574	PQFP	All	Anlys Prb ^[3]	102, 102	—	—	Contact Agilent	2	C: PI-RC64474, 2 ^[4]
RC64474, RC64574	PQFP	All	Anlys Prb ^[3]	102, 102	—	—	Contact Agilent	2	AR: CRL-60086, 2 ^[4]
RC64475, RC64575	MQUAD	All	Anlys Prb ^[3]	136, 136	—	—	Contact Agilent	2	C: PI-RC64475, 3 ^[4]
RC64475, RC64575	MQUAD	All	Anlys Prb ^[3]	136, 136	—	—	Contact Agilent	2	AR: CRL-60087, 3 ^[4]

Infineon

80C165	PQFP		Anlys Prb	51, 119				1	ET: HP-SABC165-QF06-PAS-AC, 3 ^[2]
80C166	PQFP	40	Anlys Prb	51, 136				1	ET: HP-80C166-QF06-PAS-AC, 3 ^[2]
80C167	PQFP	—	Anlys Prb	68, 153				1	ET: HP-SABC167-QF10-PAS, 4 ^[2]
80C515/535	PLCC	16	Anlys Prb	34, 68				1	ET: HP-80515/535-PLCC-PAS-AC, 2 ^[2]
80C517/537	PLCC		Anlys Prb	34, 68				1	ET: HP-80517/537-PLCC-PAS, 2 ^[2]
TC1775 (Tricore)	Design In	All	Inv Assm	102, 102	—	—	Contact Agilent	2	2 ^[1] C: IA-Tricore, 3 ^[4] AR: CRL-60092, 3 ^[4]
TC1796 (Tricore)	Design In	All	Inv Assm	102, 102	—	—	Contact Agilent	2	2 ^[1] C: IA-Tricore, 3 ^[4] AR: CRL-60093, 3 ^[4]

Intel Pentium

Pentium 4	478 pin	200	Anlys Prb	340	✓	5		5	A: E8045A A: E8046A
Interposer N/A Note: One E8046A is included with the E8045A. E8046A available separately for spares.									
Pentium 4	LGA	266	Anlys Prb	340	✓	5		5	A: E8045B A: E8046B
Interposer N/A Note: One E8046B is included with the E8045B. E8046B available separately for spares.									
Xeon	603/4 pin	200	Anlys Prb	340	✓	5		5	A: E8047B A: E8048B
Interposer N/A Note: One E8048B is included with the E8047B. E8048B available separately for spares.									

Intel 80X86

8086/8088	DIP	10	Anlys Prb ^[3]	51, —				1	ET: HP-8086/88-DIP40-PAS, 3 ^[2]
80186/88/XL	PGA	20	Anlys Prb	51, 102				1	ET: HP-80186/88-PCC1-PAS, 3 ^[2]
80C186EB	PLCC	20	Anlys Prb	51, 102				1	ET: HP-80186EB-PCC5-PAS, 3 ^[2]

[1] Requires E5380A to work with 16753/54/55/56 and 16950A

[4] Qty Mictor isolation adapters, (P/N E5346A for logic analyzers with 40-pin cables, E5380A for logic analyzers with 90-pin cables)

[2] Qty isolation adapters (P/N 01650-63203)

[5] Supports timing mode only

[3] Supports state/protocol only

[6] Contact vendor for detailed information

Processor, DSP and FPGA Solutions for Agilent Logic Analyzers

Device Information			Product Information		Supported Logic Analyzers				Order Information	
Manufacturer or Architecture and Name	Adapter for Pin Count, Pkg Type or Design In	Max Bus Clk MHz	Product Type	Min # Chns Req for Inv Assm, Max # Chns	Offline Analysis	169XX	168X and 169X	167XX	Agilent or Third Party Product Number	
									167XX, 16750/1/2, 16753/4/5/6 (68 ch)	
Intel Other										
8080	—	All	Inv Assm ^[3]	34, —					Contact Agilent	
8085	DIP	12	Anlys Prb ^[3]	34, 51				1	ET: HP-8085-DIP40-PAS, 2 ^[2]	
8031/51	DIP PLCC	16	Anlys Prb Anlys Prb	34, 51 34, 51				1	ET: HP-8031-51-DIP-PAS, 2 ^[2]	
SA-110 (StrongARM)	TQFP	85	Anlys Prb	102		— Contact Agilent —		2	C: PI-SA110, 5 ^[2]	
80200 (Xscale)	241 BGA	100	Anlys Prb	136		— Contact Agilent —		2	C: PI-80200, 4 ^[4] AR: CRL-60090, 4 ^[4]	
IXP1200/1250 (StrongARM)	Design In	All	Inv Assm	102		— Contact Agilent — — Contact Agilent —		2	2 ^[1] C: IA-IXP1200, IA-IXP1250 AR: CRL-60091	
LSI Logic										
LR33000/33050	PGA	50	Anlys Prb	85, 136		— Contact Agilent —		2	C: PI-LR33000, 5 ^[2]	
LR33020	PGA	50	Anlys Prb	119, 187		— Contact Agilent —		2	C: PI-LR-33020, 7 ^[2]	
McDonnell Douglas										
MDC281 (or MIL-STD-1750 Mnemonic)	64-DIP	All	Anlys Prb	68,68		— Contact Agilent —		1	C: PI-MAS281, 1 ^[2]	
MIPS										
(see IDT, Infineon, LSI Logic, NEC, NKK, PMC Sierra, Siemens, Toshiba)	Design In	All	Inv Assm	102, 102	✓	1 2	✓ ✓		C:IA-MIPS-IV-1	
Motorola PowerPC 5XX Family										
MPC555, 561, 562, 564, 565, 566	Design In	All	Inv Assm	102, 170	— Contact Agilent —			2	2 ^[1] A: E9610A-001	
Note: Code compression has to be disabled, Show cycles need to be turned on.										
Motorola PowerPC 6XX Family										
PowerPC 603e	Design In	66	Inv Assm	136, 170	✓	2 2	2 ^[1] ✓	2	2 ^[1] A: E9587A-001	
	255-BGA	66	Adpt-sldr	136, 170	✓	2 2	2 ^[1] ✓	2	2 ^[1] IE: LA-BGA-603E-S-B-02	
			Note: Adapter requires Agilent E9587A-001 and Ironwood Electronics SF-BGA-255A-B-01.							
	255-BGA	66	Adpt-sckt	136, 170	✓	2 2	2 ^[1] ✓	2	2 ^[1] IE: LA-BGA-603E-S-Z-01	
			Note: Requires Agilent E9587A-001 and Ironwood Electronics SF-BGA-255A-B-01.							
PowerPC 603, 603e/ei/ev	Design In	66	Inv Assm	136, 170	✓	2 2	2 ^[1] ✓	2	2 ^[1] A: E9587A-001	
Motorola PowerPC 7XX Family										
PowerPC 740	Design In	All	Inv Assm	136, 170	✓	2 2	2 ^[1] ✓	2	2 ^[1] A: E9586A-001	
	255-BGA	All	Adpt-sldr	136, 170	✓	2 2	2 ^[1] ✓	2	2 ^[1] IE: LA-BGA-740-S-B-02	
			Note: Adapter requires Agilent E9586A-001 and Ironwood Electronics SF-BGA-255A-B-01.							
	255-BGA	All	Adpt-sckt	136, 170	✓	2 2	2 ^[1] ✓	2	2 ^[1] IE: LA-BGA-740-Z-B-02	
			Note: Adapter requires Agilent E9586A-001 and Ironwood Electronics SF-BGA-255A-B-01.							
MPC745, MPC755	Design In	All	Inv Assm	136, 170	✓	2 2	2 ^[1] ✓	2	2 ^[1] A: E9586A-001	
PowerPC 750	Design In	All	Inv Assm	136, 170	✓	2 2	2 ^[1] ✓	2	2 ^[1] A: E9586A-001	
	360-BGA	66	Adpt-sldr	136, 170	✓	2 2	2 ^[1] ✓	2	2 ^[1] IE: LA-BGA-750-S-B-02	
			Note: Adapter requires Agilent E9586A-001 and Ironwood Electronics SF-BGA-360A-B-01.							
	360-BGA	66	Adpt-sckt	136, 170	✓	2 2	2 ^[1] ✓	2	2 ^[1] IE: LA-BGA-750-Z-B-02	
			Note: Adapter requires Agilent E9586A-001 and Ironwood Electronics SF-BGA-360A-B-01.							

[1] Requires E5380A to work with 16753/54/55/56 and 16950A

[2] Qty isolation adapters (P/N 01650-63203)

[3] Supports state/protocol only

[4] Qty Mictor isolation adapters, (P/N E5346A for logic analyzers with 40-pin cables, E5380A for logic analyzers with 90-pin cables)

[5] Supports timing mode only

[6] Contact vendor for detailed information

Processor, DSP and FPGA Solutions for Agilent Logic Analyzers

Device Information			Product Information		Supported Logic Analyzers				Order Information	
Manufacturer or Architecture and Name	Adapter for Pin Count, Pkg Type or Design In	Max Bus Clk MHz	Product Type	Min # Chns Req for Inv Assm, Max # Chns	169XX	168X and 169X	167XX	167XX, 16750/1/2, 16753/4/5/6 (68 ch)	Agilent or Third Party Product Number	
					16910 (102 ch)	16911 (68 ch)	16950 (68 ch)	1680/90 (136 ch) 1681/91 (102 ch) 1682/92 (68 ch) 1683/93 (34 ch)	16753/4/5/6 (68 ch)	A: Agilent AR: Agilent Resale AD: ALD C: Corelis ET: Emulation Technologies F: Future Plus IE: Ironwood Electronics

Motorola PowerPC 8XX Family

MPC801	Design In	All	Inv Assm ^[3]	102, 102	—	—	Contact Agilent	—	2	2 ^[1]	C: IA-MPC801, 3 ^[4]
MPC823, MPC850	Design In	All	Inv Assm ^[3]	102, 102	—	—	Contact Agilent	—	2	2 ^[1]	C: IA-MPC823/850 FADS, 3 ^[4] AR: CRL-60071, 3 ^[4]
	BGA	66	Anlys Prb	102, 187	—	—	Contact Agilent	—	2	2 ^[1]	C: PI-MPC823/850, 3 ^[4] AR: CRL-60072, 3 ^[4]
MPC852, 855, 859, MPC860 DP/P/T, MPC862, (MPC860 ESAR), MPC866, 870, 875, 880, 885	Design In	50	Inv Assm	102, 204	✓	1	2	2 ^[1] ✓ ✓	2	2 ^[1]	A: E9584B-001
	357-BGA	50	Anlys Prb	102, 204	✓	1	2	2 ^[1] ✓ ✓	2	2 ^[1]	A: E9584B-002
Note: E9584B-002 supports cache-on trace reconstruction.											

Motorola PowerPC 74XX Family

MPC7410, 7440, 7441, 7445, 7447, 7450, 7451, 7455, 7457	Design In	133	Inv Assm	136, 170	✓	2	2	2 ^[1] ✓	2	2 ^[1]	A: E9614A-001
Note: Supports 60X bus and MPX bus. Requires 136 ch for single processor, 170 ch for multiple processors.											

Motorola PowerPC 82XX Family

MPC8240	Design In	100	Inv Assm	136, 238	✓	2	2	2 ^[1] ✓	2	2 ^[1]	A: E9611A-001
Note: Inverse Assembler supports code flow only mode, which requires 68 ch minimum. Supports cache on trace reconstruction. See literature for more details.											
	352-BGA	100	Anlys Prb	136, 238	✓	2	2	2 ^[1] ✓	2	2 ^[1]	A: E9611A-002
MPC8241, 8245	Design In	100	Inv Assm	136, 238	—	—	Contact Agilent	—	2	2 ^[1]	A: E9619A-001
MPC8255, 8260, 8264, 8265, 8266, 8250A, 8270, 8275, 8280	Design In	66	Inv Assm	136, 238	✓	2	2	2 ^[1] ✓	2	2 ^[1]	A: E9603A-001

Motorola PowerQuicc III 85XX Family

MPC8560/8540	Design In	—	Inv Assm	✓	—	See note	—	—	A: E9520A-001	
Note: Supports DDR and GPCM bus. Supported in 1680, 1690 and 16900 Series. See design guide for logic analyzer compatibility. Channel count depends on memory controller used and whether signals are multiplexed.										

Freescale Mobile Extreme Convergence (MXC) Platform

Starcore 140 Nexus	Design In	Decoder & Inv Assm	✓	—	See note	—	—	A: E9522A-010	
Note: Minimum of 16, 32 or 48 channels based on Nexus port width. Select 1680, 1690 or 16900 Series logic analyzer with speeds compatible with MCK0 and channel count for ETM port width. Note: Select either node locked license (E9522A-010) or floating license (E9522A-020).									
MXC Memory	Design In	Memory Bus Decoder	✓	—	See note	—	—	A: E9523A-010	
Note: Select 1680, 1690 or 16900 Series logic analyzer. Compatibility depends on memory controller and memory widths used. See design guide for details. Note: Select either node locked license (E9523A-010) or floating license (E9523A-020).									

[1] Requires E5380A to work with 16753/54/55/56 and 16950A

[2] Qty isolation adapters (P/N 01650-63203)

[3] Supports state/protocol only

[4] Qty Mictor isolation adapters, (P/N E5346A for logic analyzers with 40-pin cables, E5380A for logic analyzers with 90-pin cables)

[5] Supports timing mode only

[6] Contact vendor for detailed information

Processor, DSP and FPGA Solutions for Agilent Logic Analyzers

Device Information			Product Information		Supported Logic Analyzers			Order Information	
Manufacturer or Architecture and Name	Adapter for Pin Count, Pkg Type or Design In	Max Bus Clk MHz	Product Type	Min # Chns Req for Inv Assm, Max # Chns	169XX	168X and 169X	167XX	Agilent or Third Party Product Number	
Offline Analysis									
								167XX, 16750/1/2, 16753/4/5/6 (68 ch)	

Motorola 68K

68000/10	DIP	12.5	Anlys Prb	51, 68				1	ET: HP-68000/10-DIP-PAS, 3 ^[2]
	SDIP		Anlys Prb	51, 68				1	ET: HP-68000/10-SDIP-PAS, 3 ^[2]
	PLCC		Anlys Prb	51, 68				1	ET: HP-68000/10-PLCC-PAS, 3 ^[2]
	PGA		Anlys Prb	51, 68				1	ET: HP-68000/10-PGA2-PAS, 3 ^[2]
	PLCC		Anlys Prb	51, 68				1	ET: HP-68000/10-PLCC-AC, 3 ^[2]
68EC000	PLCC	8	Anlys Prb	51, 68				1	ET: HP-68EC000-PLCC-PAS-AC, 3 ^[2]
68008	DIP	12.5	Anlys Prb	51, 68				1	ET: HP-68008-DIP-PAS, 3 ^[2]
68020	PQFP	33	Anlys Prb	85, 102				2	ET: HP-68020-PQFP-PAS-AC-2, 5 ^[2]
68030	PQFP	33	Anlys Prb	85, 102				2	ET: HP-68030-PQFP-PAS-AC-2, 5 ^[2]
68060/68040	PGA	50	Anlys Prb	102, 136	Contact Agilent			2	A: E2459A
68340	PGA	25	Anlys Prb	51, 119	Contact Agilent			1	C: PI-68340/G, 3 ^[2]
	PQFP	20	Anlys Prb	68, 119	Contact Agilent			1	AR: CRL-60052, 3 ^[2]
									ET: HP-68340-QFP-PAS-AC, 4 ^[2]

Motorola 6830X

68302	PGA	25	Anlys Prb	51, 102	Contact Agilent		1	C: PI-68302/G, 3 ^[2]
	PQFP		Anlys Prb	51, 102	Contact Agilent		1	AR: CRL-60049, 3 ^[2]
					Contact Agilent			C: PI-68302/Q, 3 ^[2]
					Contact Agilent			AR: CRL-60050, 3 ^[2]
68302	PGA	20	Anlys Prb	51, 119			1	ET: HP-68302-PGA-PAS, 3 ^[2]
	PQFP		Anlys Prb	51, 119			1	ET: HP-68302-PQFP-PAS-AC-2, 3 ^[2]
68EN302	TQFP	20	Anlys Prb	51, 119	Contact Agilent		1	C: PI-68EN302, 3 ^[2]
68LC302	PGA	25	Anlys Prb	51, 102	Contact Agilent		1	C: PI-68LC302/G, 3 ^[2]
68LC302	TQFP	25	Anlys Prb	51, 102	Contact Agilent		1	C: PI-68LC302/T, 3 ^[2]

Motorola M-Core Family

DFP99, EIM Interface, MMC2001, MMC2003, MMC2499, MMC56690	Design In	All	Inv Assm	68, 68	Contact Agilent		1	1	C: IA-MCORE-2
					Contact Agilent				AR: CRL-60089
Redcap 1, 2, Wally	Design In	All	Inv Assm	68, -	Contact Agilent		1		C: IA-MCORE-1
					Contact Agilent				AR: CRL-60088
XMC3400A	Design In	All	Inv Assm	102, -	Contact Agilent		2	2 ^[1]	C: IA-MCORE-3

Motorola DSPs

56000/01	—	All	Inv Assm ^[3]	51, -			1		Contact Agilent
56116/156/166	—	50	Inv Assm	102	Contact Agilent		2	2 ^[1]	C: IA-56116/156/166, 5 ^[2]
56303/309	TQFP	80	Anlys Prb	68, 119	Contact Agilent		1		C: PI-56303, 4 ^[2]
56651/52/53/54	Design In	All	Inv Assm	68, 68	Contact Agilent		1	1 ^[1]	C: IA-MCORE-1
					Contact Agilent				AR: CRL-60088
56L811	TQFP	All	Anlys Prb	68, 85	Contact Agilent		1	1 ^[1]	C: PI-56L811, 4 ^[2]

[1] Requires E5380A to work with 16753/54/55/56 and 16950A

[2] Qty isolation adapters (P/N 01650-63203)

[3] Supports state/protocol only

[4] Qty Mictor isolation adapters, (P/N E5346A for logic analyzers with 40-pin cables, E5380A for logic analyzers with 90-pin cables)

[5] Supports timing mode only

[6] Contact vendor for detailed information

Processor, DSP and FPGA Solutions for Agilent Logic Analyzers

Device Information			Product Information		Supported Logic Analyzers				Order Information	
Manufacturer or Architecture and Name	Adapter for Pin Count, Pkg Type or Design In	Max Bus Clk MHz	Product Type	Min # Chns Req for Inv Assm, Max # Chns	Offline Analysis	169XX	168X and 169X	167XX	Agilent or Third Party Product Number	
									167XX, 16750/1, 2 (68 ch)	
									16753/4, 5, 6 (68 ch)	
Motorola 68HCXX										
68HC11F1	PLCC	8.4	Anlys Prb	51, 68					1	ET: HP-68HC11F1-PCC1-PAS, 3 ^[2]
68HC11KA2	PLCC		Anlys Prb	51, 68					1	ET: HP-68HC11KA2-PLCC-PAS, 3 ^[2]
68HC11K4	PQFP	8	Anlys Prb	34, 85					1	ET: HP-68HC12A4-QF36-PAS, 2 ^[2]
68HC12A4	TQFP	16	Anlys Prb	51, 102					1	ET: HP-68HC11K4-QF14-PAS, 3 ^[2]
68HC12B32	PQFP		Anlys Prb	51, 68					1	ET: HP-68HC12B32-Q14, 3 ^[2]
Motorola 680X										
6800/6802	DIP	2	Anlys Prb ^[3]	34, 51					1	ET: HP-6800/2-DIP40-PAS, 2 ^[2]
6803	—	All	Inv Assm ^[3]	34, 34						Contact Agilent
14680500	—	All	Inv Assm ^[3]	34, 34						Contact Agilent
6809	DIP	2	Anlys Prb ^[3]	34, 51					1	ET: HP-6809-DIP40-PAS, 2 ^[2]
Motorola 88K										
88110	PGA	50	Anlys Prb	136		—	—	—	2	2 ^[1] C: PI-88110, 4 ^[4]
National										
NS32016	—	All	Inv Assm ^[3]	51, 51						Contact Agilent
HPC16003/4/64	—	All	Inv Assm ^[3]	51, 51						Contact Agilent
NEC										
7810/11	—	All	Inv Assm ^[3]	51, 51						Contact Agilent
V25	PLCC	16	Anlys Prb	51, 85		—	—	—	1	ET: HP-V25-PLCC-PAS, 3 ^[2]
V830	144 TQFP	50	Anlys Prb	85, 85		—	—	—	2	C: PI-V830, 5 ^[2]
Vr4100	TQFP	All	Anlys Prb	102, 102		—	—	—	2	C: PI-VR4100, 6 ^[2]
Vr4200	PQFP	50	Anlys Prb	102, 119		—	—	—	2	C: PI-R4700, 6 ^[2]
Vr4300	PQFP	All	Anlys Prb	68, 68		—	—	—	1	C: PI-R4300, 4 ^[2]
Vr5000	PGA	All	Anlys Prb	102, 153		—	—	—	2	C: PI-R5000, 6 ^[2]
Vr5432	PQFP	100	Anlys Prb	102, 102		—	—	—	2	C: PI-VR5432, 3 ^[4]
Vr5464	BGA	100	Anlys Prb	136, 136		—	—	—	2	C: PI-VR5464, 3 ^[4]
PACE										
1750	PGA	40	Anlys Prb ^[3]	51, 51					1	Lital
PMC Sierra/QED										
RM5230/31	PQFP	67	Anlys Prb	102, 119		—	—	—	2	C: PI-RM5231, 2 ^[4] AR: CRL-60069, 2 ^[4]
RM5260/61	PQFP	67	Anlys Prb	102, 153		—	—	—	2	C: PI-RM5261, 3 ^[4] AR: CRL-60070, 3 ^[4]
RM5270/71	Design In	100	Inv Assm	136, 136		—	—	—	2	2 ^[1] C: IA-RM5271
	BGA	100	Anlys Prb	136, 136		—	—	—	2	C: PI-RM5271, 3 ^[4]
RM7000	Design In	100	Inv Assm	136, 136		—	—	—	2	2 ^[1] C: IA-RM7000 AR: CRL-60085
	BGA	100	Anlys Prb	136, 136		—	—	—	2	C: PI-RM7000, 4 ^[4] AR: CRL-60073, 4 ^[4]
RM5261A, RM7000, RM7000A/B/C, RM7061A, RM7065A, RM7035C, RM7075C	Design In	All	Inv Assm	102, 102	✓	1	2	✓	✓	C:IA-MIPS-IV-1

[1] Requires E5380A to work with 16753/54/55/56 and 16950A

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[3] Supports state/protocol only

[4] Qty Mictor isolation adapters, (P/N E5346A for logic analyzers with 40-pin cables, E5380A for logic analyzers with 90-pin cables)

[5] Supports timing mode only

[6] Contact vendor for detailed information

Processor, DSP and FPGA Solutions for Agilent Logic Analyzers

Device Information			Product Information		Supported Logic Analyzers				Order Information					
Manufacturer or Architecture and Name	Adapter for Pin Count, Pkg Type or Design In	Max Bus Clk MHz	Product Type	Min # Chns Req for Inv Assm, Max # Chns	Offline Analysis	169XX	168X and 169X	167XX	Agilent or Third Party Product Number					
						16910 (102 ch)	16911 (68 ch)	16950 (68 ch)	1681/91 (102 ch)	1682/92 (68 ch)	1683/93 (34 ch)	16753/4/5/6 (68 ch)	167X, 16750/1/2 (68 ch)	

Rockwell

6502	—	All	Inv Assm ^[3]	34, —						Contact Agilent
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Siemens

80C165	PQFP		Anlys Prb	51, 119				1	ET: HP-SABC165-QF06-PAS-AC, 3 ^[2]	
80C166	PQFP	40	Anlys Prb	51, 136				1	ET: HP-80C166-QF06-PAS-AC, 3 ^[2]	
80C167	PQFP	—	Anlys Prb	68, 153				1	ET: HP-SABC167-QF10-PAS, 4 ^[2]	
80C515/535	PLCC	16	Anlys Prb	34, 68				1	ET: HP-80515/535-PLCC-PAS-AC, 2 ^[2]	
80C517/537	PLCC		Anlys Prb	34, 68				1	ET: HP-80517/537-PLCC-PAS, 2 ^[2]	
TC1775 (Tricore)	Design In	All	Inv Assm	102, 102	—	—	—	2	2 ^[1] C: IA-Tricore, 3 ^[4] AR: CRL-60092, 3 ^[4]	
TC1796 (Tricore)	Design In	All	Inv Assm	102, 102	—	—	—	2	2 ^[1] C: IA-Tricore, 3 ^[4] AR: CRL-60093, 3 ^[4]	

Texas Instruments

320C10/14	—	All	Inv Assm ^[3]	34, —						Contact Agilent
320C32	PQFP	All	Anlys Prb	102, 102	—	—	Contact Agilent	2	C: PI-320C32/P, 6 ^[2] AR: CRL-60051, 6 ^[2]	
	TQFP	All	Anlys Prb	102, 102	—	—	Contact Agilent	2	C: PI-320C32/T, 6 ^[2]	
320C40	PGA	All	Anlys Prb	85, 272	—	—	Contact Agilent	2	C: PI-320C40/P, 5 ^[2] AR: CRL-60025, 5 ^[2]	
320C52	PQFP	All	Anlys Prb	68, 68	—	—	Contact Agilent	1	C: PI-320C52, 4 ^[2]	
320C80	PGA	All	Anlys Prb ^[5]	—, 136	—	—	Contact Agilent	2	C: UI-320C80, 8 ^[2]	
320C20X Family	Design In		Inv Assm	68, —	—	—	Contact Agilent	1	1 ^[1] C: IA-320C2XX AR: CRL-60084	
320C542/48/49	Design In	All	Inv Assm ^[3]	68, 119	—	—	Contact Agilent	1	C: IA-320C54X	
	TQFP	All	Anlys Prb	68, 119	—	—	Contact Agilent	1	C: PI-320C542/8/9, 4 ^[2] AR: CRL-60061, 4 ^[2]	
34010	—	All	Inv Assm ^[3]	34, —						Contact Agilent
370C16	Design In	All	Inv Assm ^[3]	102, 102	—	—	Contact Agilent	2	2 C: IA-370C16	
370C50	—	20	Inv Assm ^[3]	34, —						Contact Agilent

Toshiba

R3900	PQFP	All	Anlys Prb	102, 119				2	C: PI-R3900, 6 ^[2]	
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Xilinx LCA

XC4005/4006	PGA	75	Anlys Prb ^[5]	—, 136	—	—	Contact Agilent	2	C: LXC-4000/PGA156, 8 ^[2]	
XC4008/4010	PGA	75	Anlys Prb ^[5]	—, 136	—	—	Contact Agilent	2	C: LXC-4000/PGA191, 8 ^[2]	

Zilog

Z80	DIP	16	Anlys Prb	34, 51				1	ET: HP-Z80-DIP-PAS, 2 ^[2]	
Z80	PLCC	16	Anlys Prb	34, 51				1	ET: HP-Z80-PLCC-PAS, 2 ^[2]	
Z180	PLCC	16	Anlys Prb	34, 68				1	ET: HP-Z180-PLCC-PAS, 2 ^[2]	
Z8001/8002	—	All	Inv Assm ^[3]	51, —						Contact Agilent

[1] Requires E5380A to work with 16753/54/55/56 and 16950A

[4] Qty Mictor isolation adapters, (P/N E5346A for logic analyzers with 40-pin cables, E5380A for logic analyzers with 90-pin cables)

[2] Qty isolation adapters (P/N 01650-63203)

[5] Supports timing mode only

[3] Supports state/protocol only

[6] Contact vendor for detailed information

Bus Interconnect Solutions for Agilent Logic Analyzers

Device Information			Product Information		Supported Logic Analyzers				Order Information			
Manufacturer or Architecture and Name	Connect Scheme	Max Bus Clk MHz (unless specified otherwise)	Product Type	Min # Chns Req for Inv Assm, Max # Chns	169XX	168X and 169X	167XX	1674X, 16750/1, 2, 4, 5, 6 (68 ch)	16753/4, 5, 6 (68 ch)	Agilent or Third Party Product Number		
					16910 (102 ch)	16911 (68 ch)	16950 (68 ch)	1680/90 (136 ch)	1681/91 (102 ch)	1682/92 (68 ch)	1683/93 (34 ch)	16760A

PCI Bus Solutions

PCI Compact PCI/Ext	Interposer	33	Anlys Prb	68, 119	✓ 1 1	✓ ✓ ✓	1	F: FS3020 AR: FSI-60021		
Note: If 32-bit PCI, minimum # of channels is 68. If 64-bit PCI, minimum # of channels is 102.										
PCI/EXT-32 Passive	Interposer	33	Anlys Prb	68	✓ 1 1	✓ ✓ ✓	1	F: FS2000 AR: FSI-60006		
Note: This solution is for 5 V systems.										
PCI-32/Extender	Design In	66	Anlys Prb	68, 68	Contact Agilent		1	C: PI-PCI32 AR: CRL-60030		
PCI-32E/Hot Swap Extender	Design In	66	Anlys Prb	102, 102	Contact Agilent		2	C: PI-PCI32E		
PCI-64/Extender	Design In	66	Anlys Prb	102, 102	Contact Agilent		2	C: PI-PCI64		
PCI/EXT-64 Passive	Edge conn	66	Anlys Prb	68, 102	✓ 1 1	✓ ✓ ✓	1	F: FS2001 AR: FSI-60005		
Note: This solution is for 3.3 V or 5 V systems.										
Note: If 32-bit PCI, minimum # of channels is 68. If 64-bit PCI, minimum # of channels is 102.										
PCI/EXT-64 Passive	Interposer	66	Anlys Prb	68, 102	✓ 1 1 1	✓ ✓ ✓	1 1	F: FS2005 ^[6] , 3 ^[4] AR: FSI-60025, 3 ^[4]		
Note: This solution is for 3.3 V systems.										
Note: If 32-bit PCI, minimum # of channels is 68. If 64-bit PCI, minimum # of channels is 102.										
PCI/EXT-64 Active	Interposer	66	Anlys Prb	68, 170			1	F: FS2102 AR: FSI-60027		
Note: This solution is for 3.3 V systems.										
PCI/EXT-64 Active	Interposer	66	Anlys Prb	68, 170			1	F: FS2103 AR: FSI-60028		
Note: This solution is for 5 V systems.										
PCI Cardbus	Interposer	33	Anlys Prb	68, 68	✓ 1 1	✓ ✓ ✓	1	F: FS2004 AR: FSI-60018		
PCI Mezz (PMC) - 64 bit	Interposer	66	Anlys Prb	68, 102	✓ 1 1	✓ ✓ ✓	1	F: FS3011 AR: FSI-60056		
Note: If 32-bit PCI, minimum # of channels is 68. If 64-bit PCI, minimum # of channels is 102.										
PCI EIO	Interposer	33	Anlys Prb	68, 68	✓ 1 1 1	✓ ✓ ✓	1 1	F: FS3030 ^[6] , 2 ^[4]		
PCI Software	Design In	66	Protocol Decode	68, 102					F: FS1101 AR: FSI-60046	
Note: This solution is for 16500, 1660, 1670.										
PCI Software for 16700	Design In	66	Protocol Decode	68, 102			1 1	F: FS1103 AR: FSI-60092		
Note: This solution is for 16700.										
PCI Windows Software License	Design In	66	Protocol Decode	68, 102	✓ 1 1	✓ ✓ ✓			F: FS1110 AR: FSI-60070	
PCI Compliance Verification	Varies	66	Protocol Decode & Compliance	68, 102			1 1			F: FS1105 AR: FSI-60039
PCI Performance Verification	Varies	66	Protocol Decode & Performance	68, 102			1 1			F: FS1106 AR: FSI-60040

[1] Requires E5380A to work with 16753/54/55/56 and 16950A

[2] Qty isolation adapters (P/N 01650-63203)

[3] Supports state/protocol only

[4] Qty Mictor isolation adapters, (P/N E5346A for logic analyzers with 40-pin cables, E5380A for logic analyzers with 90-pin cables)

[5] Supports timing mode only

[6] Contact vendor for detailed information

Bus Interconnect Solutions for Agilent Logic Analyzers

Device Information			Product Information		Supported Logic Analyzers				Order Information			
Manufacturer or Architecture and Name	Connect Scheme	Max Bus Clk MHz (unless specified otherwise)	Product Type	Min # Chns Req for Inv Assm, Max # Chns	169XX	168X and 169X	167XX	16753/4/5/6 (68 ch)	16750/1/2 (68 ch)	Agilent or Third Party Product Number		
					16910 (102 ch)	16911 (68 ch)	16950 (68 ch)	1680/90 (136 ch)	1681/91 (102 ch)	1682/92 (68 ch)	1683/93 (34 ch)	16760A

PCI-X Bus Solutions

PCI-X 1.0	Interposer 133	Anlys Prb 68, 102	✓ 1 1 ✓ ✓ ✓ 1	F: FS2007 AR: FSI-60043
Note: If 32-bit PCI, minimum # of channels is 68. If 64-bit PCI, minimum # of channels is 102.				
PCI-X 1.0	Interposer 266	Anlys Prb 68 / 102	✓ 1 1 1 ✓ ✓ ✓ 1 1	F: FS2010 AR: FSI-60107
Note: If 32-bit PCI-X, minimum # of channels is 68. If 64-bit PCI, minimum # of channels is 102.				
PCI-X Software License	Design In 266 For use w/ FS2010 or additional license	SW License 68 / 102	✓ 1 1 1 ✓ ✓ ✓ 1 1	F: FS1128 AR: FSI-60109
Note: If 32-bit PCI-X, minimum # of channels is 68. If 64-bit PCI, minimum # of channels is 102.				
PCI-X Windows Software License	Design In 133 or compat w/ FS2007	Protocol Decode 68, 102	✓ 1 1 ✓ ✓ ✓	F: FS1111 AR: FSI-60071
Note: If 32-bit PCI, minimum # of channels is 68. If 64-bit PCI, minimum # of channels is 102.				
PCI-X 1.0	Edge conn 133	Anlys Prb 102, 136	2 2	F: FS2104 ^[6] AR: FSI-60042
Note: This solution requires Agilent E2929C. Contact Future Plus for complete details.				
PCI-X 2.0	Interposer 266 or solder on adapter	Anlys Prb ^[3] 68, 102	✓ 1 1 1 ✓ ✓ ✓ 1 1	F: FS2009 ^[6] AR: FSI-60082
Note: 1680/1690 support for PCI-X 2.0 Mode 1 only. Note: If 32-bit PCI, minimum # of channels is 68. If 64-bit PCI, minimum # of channels is 102.				
PCI-X Windows Software License	Design In 266 or compat w/ FS2009	Protocol Decode 68, 102	✓ 1 1 ✓ ✓ ✓	F: FS1118 AR: TBD
Note: Offline supports all modes. 1680/90 acq supports PCI-X 2.0 Mode 1 only. Note: If 32-bit PCI, minimum # of channels is 68. If 64-bit PCI, minimum # of channels is 102.				
PCI-X 16700 Software License	Design In 133	Protocol Decode 68, 102	1 1	F: FS1104 AR: FSI-60045
Note: If 32-bit PCI, minimum # of channels is 68. If 64-bit PCI, minimum # of channels is 102.				
PMC-X	Interposer 66	Anlys Prb 68 / 102	✓ 1 1 1 ✓ ✓ ✓ 1 1	F: FS3012
PMC-X Software License	Offline or 66 additional license	SW License 68 / 102	✓ 1 1 1 ✓ ✓ ✓ 1 1	F: FS1127

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[2] Qty isolation adapters (P/N 01650-63203)

[3] Supports state/protocol only

[4] Qty Mictor isolation adapters, (P/N E5346A for logic analyzers with 40-pin cables, E5380A for logic analyzers with 90-pin cables)

[5] Supports timing mode only

[6] Contact vendor for detailed information

Bus Interconnect Solutions for Agilent Logic Analyzers

Device Information			Product Information		Supported Logic Analyzers			Order Information						
Manufacturer or Architecture and Name	Connect Scheme	Max Bus Clk MHz (unless specified otherwise)	Product Type	Min # Chns Req for Inv Assm, Max # Chns	169XX	168X and 169X	167XX	Agilent or Third Party Product Number						
					16910 (102 ch)	16911 (68 ch)	16950 (68 ch)	1681/90 (136 ch)	1682/92 (68 ch)	1683/93 (34 ch)	1674X, 16750/1-2 (68 ch)	16753/4/5/6 (68 ch)	16760A	

PCI-Express Solutions

Advanced Switching Interconnect (ASI)				Contact Agilent			
PCI-Express x1, x2, x4	Slot Connector or Midbus	2.5G	Anlys Probe 68*, 136 ✓	1*	1*	1*	A: N4220B option 210
			* One Logic Analyzer module required per direction of traffic.				
			Note: N4220B-210 requires at least one of the following cable sets.				
			Select either node locked license (N4220B-001) or floating license (N4220B-021).				
			x1 Slot Connector				A: N4227A
			x4 Slot Connector				A: N4225A
			Midbus Full Size				A: N4221A
			Midbus 1/2 Size				A: N4228A
			Flying Lead Set				A: N4221F
PCI-Express x8	Slot Connector or Midbus	2.5G	Anlys Probe 136*, 272 ✓	2*	2*	2*	A: N4220B option 210
			* Two Logic Analyzer modules required per direction of traffic.				
			Note: N4220B-210 requires at least one of the following cable sets.				
			Select either node locked license (N4220B-001) or floating license (N4220B-021).				
			x8 Slot Connector				A: N4224A
			Midbus Full Size				A: N4221A
			Midbus 1/2 Size				A: N4228A
			Flying Lead Set				A: N4221F
PCI-Express x16	Slot Connector or Midbus	2.5G	Anlys Probe 272*, 544 ✓	4*	4*	4*	A: N4220B option 210
			* Four Logic Analyzer modules required per direction of traffic.				
			Note: One N4220B-210 is required per direction of traffic.				
			Note: N4220B-210 requires at least one of the following cable sets.				
			Select either node locked license (N4220B-001) or floating license (N4220B-021).				
			x16 Slot Connector				A: N4223A
			Midbus Split				A: N4222A
			Note: N4220B-210 requires at least one of the cable sets above OR TWO of the following cable sets.				
			Midbus Full Size				A: N4221A
			Flying Lead Set				A: N4221F
PCI-Express Offline License			Offline License				A: N4250A-010
							A: N4250A-020
			Select either node locked license (N4219B-010) or floating license (N4219B-020).				

[1] Requires E5380A to work with

16753/54/55/56 and 16950A

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[3] Supports state/protocol only

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E5380A for logic analyzers with 90-pin cables)

[5] Supports timing mode only

[6] Contact vendor for detailed information

Bus Interconnect Solutions for Agilent Logic Analyzers

Device Information			Product Information		Supported Logic Analyzers				Order Information	
Manufacturer or Architecture and Name	Connect Scheme	Max Bus Clk MHz (unless specified otherwise)	Product Type	Min # Chns Req for Inv Assm, Max # Chns	169XX	168X and 169X	167XX	1674X, 16750/1, 2 (68 ch)	16753/4, 5, 6 (68 ch)	Agilent or Third Party Product Number
					16910 (102 ch)	16911 (68 ch)	16950 (68 ch)	1681/90 (136 ch)	1682/92 (68 ch)	16760A

Memory Solutions - DDR

DIMM DDR 184-pin	Edge Conn	266 MT	Anlys Prb	204, 204	✓	2	3	3	F: FS230
Note: The 1674x is not supported.									
DIMM DDR 184-pin	Edge Conn	333 MT	Anlys Prb	204, 204	✓	3	3	3	F: FS231 ^[6] AR: FSI-60066
Note: FS2331 is an advanced probe.									
DIMM DDR 184-pin	Interposer	400 MT	Anlys Prb	272, 272	✓		4	4	F: FS2336 ^[6] AR: FSI-60089
Note: FS2336 is a basic probe. Requires 16700 ver 2.80 or higher.									
DIMM DDR2 240-pin	Interposer	533 MT	Anlys Prb	272, 272	✓	3	4	4	F: FS2332 ^[6] AR: FSI-60075
Note: FS2332 is a basic probe. Requires 16700 ver 2.80 or higher.									
SODIMM DDR 200-pin	Interposer	333 MT	Anlys Prb	272, 272	✓		4	4	F: FS2333 ^[6] AR: FSI-60081
Note: FS2333 is a basic probe. Requires 16700 ver 2.80 or higher.									
SODIMM DDR2 200-pin	Interposer	533 MT	Anlys Prb	272, 272	✓		4	4	F: FS2337 ^[6] AR: FSI-60094
Note: FS2337 is a basic probe. Requires 16700 ver 2.80 or higher.									
DDR 16700 Software License	Design In	333 MT	Protocol Decode	68, 68				1	F: FS1107 AR: FSI-60063
DDR Windows Software License	N/A	333 MT	Protocol Decode	N/A	✓	2	3	3	F: FS1112 AR: FSI-60072
Note: FS1112 supports the FS2330 and FS2331.									
DDR Windows Software License	N/A	400 MT	Protocol Decode	N/A	✓	3	4	4	F: FS1115 AR: FSI-60087
Note: FS1115 supports the FS2336.									
DDR2 Windows Software License	N/A	533 MT	Protocol Decode	N/A	✓	3	4	4	F: FS1117 AR: FSI-60095
Note: FS1117 supports the FS2332.									
DDR1 333 MT/s SODIMM	Anlys Prb and Interposer	166 MHz (333 MT/s)	Anlys Prb	136 / 272	✓		2	2	F: FS2335 AR: FSI-60086
DDR2 Windows License	Design In	266 MHz or use with (533 MT/s) FS2337 or additional license	SW License	136 / 272	✓		2		F: FS1116 AR: FSI-60088
DDR2 Embedded for 16700	Use for embedded designs		SW License	136 / 272	✓			2	F: FS1123 AR: FSI-60093
Embedded DDR2	Use for embedded designs		SW License	136 / 272	✓		2	2	F: FS1124 AR: FSI-60100
Embedded DDR1	Use for embedded designs		SW License	136 / 272	✓		2	2	F: FS1125 AR: FSI-60101
DDR1 License	Offline or additional license		SW License	136 / 272	✓		2	2	F: FS1126 AR: FSI-60106

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[2] Qty isolation adapters (P/N 01650-63203)

[3] Supports state/protocol only

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[5] Supports timing mode only

[6] Contact vendor for detailed information

Bus Interconnect Solutions for Agilent Logic Analyzers

Device Information			Product Information		Supported Logic Analyzers				Order Information	
Manufacturer or Architecture and Name	Connect Scheme	Max Bus Clk MHz (unless specified otherwise)	Product Type	Min # Chns Req for Inv Assm, Max # Chns	169XX	168X and 169X	167XX	16753/4/5/6 (68 ch)	16750/1/2 (68 ch)	Agilent or Third Party Product Number
					16910 (102 ch)	16911 (68 ch)	16950 (68 ch)	1681/90 (136 ch)	1682/92 (68 ch)	16760A

Memory Solutions - Fully Buffered DIMM (FBD)

FBD Slot Probe	Anlys Prb (no Interposer)	4.8 GT/s	Anlys Prb	204 / 340	✓	Note: Uses three to five 16753/4/5/6 or 16950A. Refer to www.futureplus.com .				F: FS2338 AR: FSI-60097
FBD Software License	Offline or additional license	4.8 GT/s	SW License		✓					F: FS1129 AR: FSI-60111
FBD Validation DIMM	Anlys Prb (no Interposer)	400 MHz (800 MT/s)	FBD DDR2	136 / 272	✓	Note: Uses two to four 16753/4/5/6 or 16950A. Refer to www.futureplus.com .				F: FS2340 AR: FSI-60099
FBD DIMM	Anlys Prb with Interposer	4.8 GT/s	Anlys Prb	204 / 340	✓	Note: Uses three to five 16753/4/5/6 or 16950A. Refer to www.futureplus.com .				F: FS2343 AR: FSI-60105
FBD/DDR2	4x Resistor Pack	Flying Lead Prb				1		1		A: N4234A
FBD/DDR2	4x/8x BGA DRAM Interposer									A: N4237A
FBD	AMB Parametric Test Fixture		AMB Parametric Test Fixture							A: N4235A
FBD	Parametric Test Fixture		Parametric Test Fixture							A: N4236A
FBD	Slot Parametric Probe									A: N4238A

Memory Solutions - SDR

DIMM SDR 168-pin	Interposer	66	Anlys Prb ^[5]	—, 102	—	Contact Agilent	—	2	2	F: FS2320 ^[6] , 3 ^[4]
DIMM SDR 168-pin	Edge Conn	133	Anlys Prb	102, 102				2		F: FS2321
SIMM SDR 72-pin	Interposer	66	Anlys Prb ^[5]	—, 68	1	1		1		F: FS2310 ^[6] AR: FSI-60012

[1] Requires E5380A to work with 16753/54/55/56 and 16950A

[2] Qty isolation adapters (P/N 01650-63203)

[3] Supports state/protocol only

[4] Qty Mictor isolation adapters, (P/N E5346A for logic analyzers with 40-pin cables, E5380A for logic analyzers with 90-pin cables)

[5] Supports timing mode only

[6] Contact vendor for detailed information

Bus Interconnect Solutions for Agilent Logic Analyzers

Device Information			Product Information		Supported Logic Analyzers				Order Information						
Manufacturer or Architecture and Name	Connect Scheme	Max Bus Clk MHz (unless specified otherwise)	Product Type	Min # Chns Req for Inv Assm, Max # Chns	Offline Analysis	169XX	168X and 169X	167XX	Agilent or Third Party Product Number						
						16910 (102 ch)	16911 (68 ch)	16950 (68 ch)	1681/91 (102 ch)	1682/92 (68 ch)	1683/93 (34 ch)	1674X, 16750/1-2 (68 ch)	16753/4/5/6 (68 ch)	16760A	

Other Standard Bus Solutions

Advanced Switching Interconnect (ASI)										Contact Agilent	
AGP2X	Interposer	133	Anlys Prb ^[5]	—	—	—	—	—	1	1	F: FS2220 ^[6]
AGP4X	Interposer	266	Anlys Prb ^[3]	204, 204					3		F: FS2221
AGP8X (AGP3.0)	Solder On	532	Anlys Prb ^[3]	272, 272					4		F: FS2229 AR: FSI-60055
CAN Bus	9-pin D-Sub Connector	All	Anlys Prb	34, 34	✓	1	✓	✓	✓	✓	AD: ALD-232A CAN AR: ALO-60017
					Note: This is an option to ALD's RS232 analysis probe. The RS232 analysis probe is orderable from ALD as ALD-232A or as an Agilent resale product as ALO-60008.						
Fibre Channel	Cable	1.0625 GT	Anlys Prb ^[3]	68, 136					1		F: FS4300
Fibre Channel	Cable	2.125 GT	Anlys Prb ^[3]	68, 272	✓	1	1	✓	✓	✓	F: FS4320 ^[6]
Fibre Channel Traffic Generator Windows License	Cable	2.125 GT	Traffic Generator SW for PC								F: FS1121
Fibre Channel Windows Software License	N/A	2.125 GT	Protocol Decode	68, 272	✓	1	1	✓	✓		F: FS1122
HyperTransport	Anlys Prb for Soft Touch Probes		Anlys Prb	64 / 128	✓		1			1	F: FS2243 AR: FSI-60110
HyperTransport	Design In	2 GT	Anlys Prb ^[3]	68, 272	1	2	2		2	2	F: FS2240 ^[6]
					Note: This solution recommended for 6 layer or greater boards. Logic Analyzer channel count depends on speed and system configuration. Contact Future Plus.						
HyperTransport	Design In	400 MT	Anlys Prb ^[3]	68, 272	1	2	2		2	2	F: FS2241 ^[6] AR: FSI-60080
					Note: This solution recommended for 4 layer boards. Logic Analyzer channel count depends on speed and system configuration. Contact Future Plus.						
HyperTransport Windows Software License	N/A	1 GT	Protocol Decode & Lic	N/A	✓	1	2	2			F: FS1113 AR: FSI-60073
I ² C Bus	0.025" sqr posts or indiv signals		Anlys Prb	34, 34	✓	1	1	✓	✓	✓	AD: ALD-232A opt I ² C AR: ALO-60014
					Note: This is an option to ALD's RS232 analysis probe. The RS232 analysis probe is orderable from ALD as ALD-232A or as an Agilent resale product as ALO-60008.						
IBM ISA (AT)	Design In	All	Anlys Prb	102, 102		Contact Agilent			2		C: PI-ISA
IEEE 488 (HPIB)	IEEE 488 connector	All	Anlys Prb	17, 34		Contact Agilent			1		AD: ALD-488 AR: ALO-60010
IEEE 1394A	Cable	400 Mbit/s	Anlys Prb ^[3]	68, 102		Contact Agilent			1		F: FS4200
InfiniBand x1,x4	Cable Set	2.5Gb/s	Anlys Prb ^[3]	136, 136	✓		2		2		A: N4220B option 220
					Note: N4220B-220 for InfiniBand x1 or x4 requires following cable set. Select either node locked license (N4220B-002) or floating license (N4220B-022).						
					x1,x4 Cable Set						A: N4232A
InfiniBand x12	Cable Set	2.5Gb/s	Anlys Prb ^[3]	408, 408	✓		5		5		A: N4220B option 220
					Note: N4220B-220 for InfiniBand x12 requires following cable set. Select either node locked license (N4220B-002) or floating license (N4220B-022).						
					x12 Cable Set						A: N4231A

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[5] Supports timing mode only

[6] Contact vendor for detailed information

Bus Interconnect Solutions for Agilent Logic Analyzers

Device Information			Product Information		Supported Logic Analyzers				Order Information	
Manufacturer or Architecture and Name	Connect Scheme	Max Bus Clk MHz (unless specified otherwise)	Product Type	Min # Chns Req for Inv Assm, Max # Chns	169XX	168X and 169X	167XX	1674X, 16750/1-2 (68 ch)	16753/4/5/6 (68 ch)	Agilent or Third Party Product Number
					16910 (102 ch)	16911 (68 ch)	16950 (68 ch)	1681/91 (102 ch)	1682/92 (68 ch)	16760A

Other Standard Bus Solutions (continued)

JTAG 1149.1	Design In	All	Anlys Prb	17, 17	—	—	—	Contact Agilent	1	C: BA-1149.1 AR: CRL-60027					
JTAG 1149.5	Design In	All	Anlys Prb	17, 17	—	—	—	Contact Agilent	1	C: BA-1149.5					
Rambus	Edge Conn	800 MT	Anlys Prb ^[3]	136, 136	—	—	—	Contact Agilent	2	F: FS2222 Note: This solution supports the 184 pin RIMM connection. Not supported for 1674X.					
Rambus	Design In	800 MT	Anlys Prb ^[3]	136, 136	—	—	—	Contact Agilent	2	F: FS2224 Note: This solution supports the general purpose connection. Not supported for 1674X.					
RS232c, RS449, IEEE1284	Cable	All	Anlys Prb	34, 34	✓	1	1	1	✓	✓	✓	✓	✓	1	AD: ALD-232A AR: ALO-60008
SCSI 1,2,3	Cable	20 MT	Anlys Prb	34, 68	—	—	—	Contact Agilent	1	F: FS2230 AR: FSI-60024					
SCSI LVD	Cable	160 MT	Anlys Prb	34, 68	—	—	—	Contact Agilent	1	F: FS2232 AR: FSI-60041					
Serial ATA (SATA)	Interposer	1.5 G	Anlys Prb	68, —	✓	1	1	1	—	—	A: N4219B Note: Each N4219B requires one each N4218A interposer. Select either node locked license (N4219B-010) or floating license (4219B-020).				
					SATA Interposer				—	A: N4218A					
Serial ATA (SATA) Offline License					Offline License					A: N4249A-010 A: N4249A-020 Select either node locked license (N4219B-010) or floating license (4219B-020).					
Univ Serial Bus 1.1	Cable	12 Mbit/s	Anlys Prb	34, 51	✓	1	1	✓	✓	✓	✓	1	F: FS4100 AR: FSI-60019		
Univ Serial Bus 2.0	Cable	480 Mbit/s	Anlys Prb ^[3]	34, 96	✓	1	1	✓	✓	✓	✓	1	F: FS4120 AR: FSI-60050		
USB Windows Software License	N/A	480 Mbit/s	Protocol Decode	N/A	✓	1	1	✓	✓	✓	✓	✓	F: FS1114 AR: FSI-60074		
VME64/VXI	Cable	All	Anlys Prb	85, 153	—	—	—	Contact Agilent	1	F: FS3100 AR: FSI-60011					

[1] Requires E5380A to work with 16753/54/55/56 and 16950A

[2] Qty isolation adapters (P/N 01650-63203)

[3] Supports state/protocol only

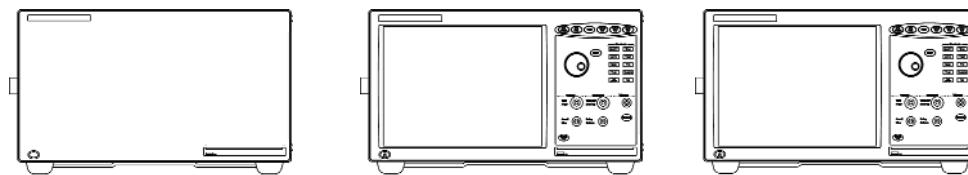
[4] Qty Mictor isolation adapters, (P/N E5346A for logic analyzers with 40-pin cables, E5380A for logic analyzers with 90-pin cables)

[5] Supports timing mode only

[6] Contact vendor for detailed information

2 acquire

Modular Logic Analysis Systems – 16900 Series Mainframes and Logic Analyzer Modules



Agilent Model Number	16900A	16902A	16903A
Number of Slots	6	6	3
Multiframe Pro	Yes	Yes	No
Display Type(s) and Resolution	Supports up to 4 external monitors; up to 1600 x 1200	Built-in color touch screen, 12.1 inch, 800 x 600; supports up to 4 external monitors up to 1600 x 1200	Built-in color touch screen, 12.1 inch, 800 x 600; supports up to 4 external monitors up to 1600 x 1200
PCI Expansion Slots	1 full profile, 1 low profile	1 full profile, 1 low profile	1 full profile, 1 low profile

16900 Series Logic Analysis Systems - Options and Accessories

Option 014	Gbit LAN card for 16900 Series Frames (Low Profile, Copper Connection). Compatible with 16900 series frames only. Must be ordered at time of frame purchase. Comes installed in low profile PCI slot on rear of frame. LAN card supports Gbit as well as 10/100Base-T over copper with low profile bracket.
E5860A	Gbit LAN card for 16900 Series Frames (Low Profile, Copper Connection). Compatible with 16900 series frames only. Requires availability of low profile PCI slot on rear of frame. LAN card supports Gbit as well as 10/100Base-T over copper with low profile bracket. Recommend E5861A Multiframe Cable if connecting multiple 16900A or 16902A frames together.
E5861A	Multiframe cable for 16900A or 16902A Logic Analysis Systems. Compatible with 16900A and 16902A frames only. Quantity of cables required is one less than the number of frames being connected together.

State/Timing Logic Analysis Modules

State and timing logic analyzers support inverse assembly, which is used for most processor and bus measurements. You may

want to consider additional measurement capability to provide a complete signals to source debug environment.

Select according to channel count, acquisition speed, and memory depth needs. Note: Probes are ordered separately. Specify probes when ordering to ensure correct connection between your logic analyzer and device under test. Order any combination and quantity of the compatible probes listed in the 'Connect' section.

Agilent Model Number	16910A / 16911A	16950A	16760A
Channels per Module	102 / 68	68	34
Max Channels on Single Time Base and Trigger	510 / 340	340	170
High-speed Timing Zoom	4 GHz (250 ps) with 64 K depth	4 GHz (250 ps) with 64 K depth	N/A
Max Timing Sample Rate (Half/Full Channels)	1.0 GHz (1.0 ns) / 500 MHz (2.0 ns)	1.2 GHz (833 ps) / 600 MHz (1.67 ns)	800 MHz (1.25 ns)
Max State Clock Rate	450 MHz with option 500, 250 MHz with option 250	600 MHz	800 MHz
Max State Data Rate	500 Mb/s with option 500, 250 Mb/s with option 250	800 Mb/s	1.5 Gb/s
Memory Depth	256 K up to 32 M	256 K up to 64 M	64 M
Supported Signal Types	Single-ended	Single-ended and differential	Single-ended and differential
Eye Finder Capability	Yes	Yes	Yes
Eye Scan Capability	Yes	Yes	Yes
Probe Compatibility	40-pin cable connector	90-pin cable connector	90-pin cable connector

Logic Analyzer Module/Frame Compatibility Table

Discontinued Products

Measurement Module Category	Model Number	Description	16900 Series	16700 Series	16500B	16500A
State and Timing	16950A	4 GHz timing zoom, 1.2 GHz timing, 600 MHz state, 256 K to 64 M	✓			
	16910/11A	4 GHz timing zoom, 800 MHz timing, 450 MHz state, 256 K to 32 M	✓			
	16760A	800 MHz timing, 1.5 Gb/s state, 64 M memory	✓	✓		
	16753/4/5/6A	4 GHz timing zoom, 1.2 GHz timing, 600 MHz state, 1 M to 64 M	✓	✓		
	16750/51/52B	2 GHz timing zoom, 800 MHz timing, 400 MHz state, 4 M to 32 M	✓	✓		
	16750/51/52A	2 GHz timing zoom, 800 MHz timing, 400 MHz state, 4 M to 32 M	✓	✓		
	16740/41/42A	2 GHz timing zoom, 800 MHz timing, 200 MHz state, 1 M to 16 M	✓	✓		
	16718/19A	2 GHz timing zoom, 667 MHz timing, 333 MHz state, 8 M to 32 M	✓			
	16715/16/17A	Varies by module: 2 GHz timing zoom, 667 MHz timing, 167 MHz to 333 MHz state, 512 K to 2 M		✓		
	16710/11/12A	500 MHz timing, 100 MHz state, 8 K to 128 K		✓		
	16557D	500 MHz timing, 140 MHz state, 2 M		✓	✓	
	16556A/D	400 MHz timing, 110 MHz state, 2 M		✓	✓	
	16555A/D	500 MHz timing, 110 MHz state, 2 M		✓	✓	
	16554A	250 MHz timing, 100 MHz state, 512 K		✓	✓	
	16550A	500 MHz timing, 100 MHz state, 4 K		✓	✓	✓
	16542A	500 MHz timing, 100 MHz state, 1 M		✓	✓	
	16540/41 A/D	100 MHz timing, 100 MHz state, 4 K to 16 K		✓	✓	
	16517/18A	4 GHz timing/1 GHz synchronous state, 64 K memory depth (master/expander)		✓	✓	✓
	16515/16A	1 GHz timing, 8K memory depth		✓	✓	
	16510B	100 MHz timing, 35 MHz state, 1 K		✓	✓	
	16510A	100 MHz timing, 25 MHz state, 1 K		✓	✓	

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Modular Logic Analysis Systems Pattern Generator Module and Oscilloscopes

Oscilloscopes for Logic Analysis Systems

Agilent DSO 8000 Series, Infiniium 54800 Series, 6000 Series	
Oscilloscope Type	External
Maximum Bandwidth	13 GHz
Maximum Sampling Rate	40 GSa/s
Maximum Memory Depth	128 M
Channels/Oscilloscope	2 and 4
Maximum Number of Channels on a Single Time Base and Trigger	4

16720A Pattern Generator Module

Maximum Clock	300 MHz	180 MHz
Number of Data Channels per Module	24	48
Maximum Vector Width (5 Module System)	120 bits	240 bits
Memory Depth, in Vectors	16 M	8 M
"IF" Command	No	No

Up to 5 modules can be interconnected. Order at least one clock pod for each module used as a master, and at least one data pod for every 8 output channels.

Pattern Generator Clock and Data Pods for 16720A

Option Number	Description
Opt 011	TTL Clock Pod and Lead Set
Opt 013	3-State TTL/CMOS Data Pod and Lead Set
Opt 014	TTL Data Pod and Lead Set
Opt 015	2.5V Clock Pod and Lead Set
Opt 016	3-State 2.5V Data Pod and Lead Set
Opt 017	3.3V Clock Pod and Lead Set
Opt 018	3-State TTL/3.3V Data Pod and Lead Set
Opt 021	ECL Clock Pod and Lead Set
Opt 022	ECL (Terminated) Data Pod and Lead Set
Opt 023	ECL (Unterminated) Data Pod and Lead Set
Opt 031	5V PECL Clock Pod and Lead Set
Opt 032	5 V PECL Data Pod and Lead Set
Opt 033	3.3V LVPECL Clock Pod and Lead Set
Opt 034	3.3V LVPECL Data Pod and Lead Set
Opt 041	1.8V Clock Pod and Lead Set
Opt 042	3-State 1.8V Data Pod and Lead Set
Opt 051	LVDS Clock Pod and Lead Set
Opt 052	LVDS Data Pod and Lead Set

Pattern Generator Frame Compatibility Table

Discontinued Products

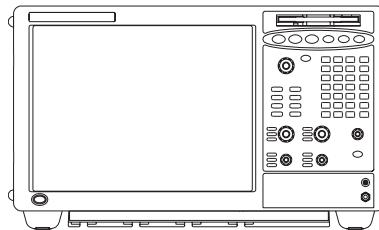
Measurement Module Category	Model Number	Description	16900 Series	16700 Series	16500C	16500B
Pattern Generator	16720A	300 MV/s, 180 MHz in 48 Ch. 16 MV memory	✓	✓		
	16522A	200 MH/s, 258 K memory		✓	✓	
	16520/21A	50 MV/s, 4 K memory, 12 ch			✓	✓

1680 Series Standalone Logic Analyzers

1690 Series PC-Hosted Logic Analyzers

1680 Series Standalone Logic Analyzers

- Standalone instrument
- 12.1" built-in color display
- Cable flexibility – front or back
- Front panel knobs and hot keys
- Includes a mouse, mini-keyboard, front panel cover and accessory pouch
- Note: Probes are ordered separately. Please specify probes when ordering to ensure correct connection between your logic analyzer and device under test. Order any combination and quantity of the compatible probes listed in the 'Connect' section.



Measurement Modes

Timing: 800 MHz / 400 MHz (Half/Full Channel)

Memory Depths

Standard ('A' Series) 1 M / 512 K (Half/Full channel)
Deep ('AD' Series) 4 M / 2 M (Half/Full channel)

State: 400 MHz

Standard ('A' Series) 256 K
Deep ('AD' Series) 1 M

Transitional Timing: 400 MHz

Standard ('A' Series) 256 K
Deep ('AD' Series) 1 M

136 Channels

1680A

102 Channels

1681A

68 Channels

1682A

34 Channels

1683A

1680AD

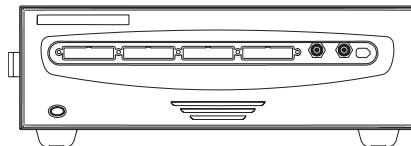
1681AD

1682AD

1683AD

1690 Series PC-Hosted Logic Analyzers

- PC-hosted instrument
- Uses PC display
- Cable connection from the front
- Smallest footprint
- Lowest priced of any high-performance logic analyzers
- Includes desktop IEEE 1394 PCI card and cable, laptop IEEE 1394 cable and accessory pouch
- Note: Probes are ordered separately. Please specify probes when ordering to ensure correct connection between your logic analyzer and device under test. Order any combination and quantity of the compatible probes listed in the 'Connect' section.



Measurement Modes

Timing: 800 MHz / 400 MHz (Half/Full Channel)

Memory Depths

Standard ('A' Series) 1 M / 512 K (Half/Full channel)
Deep ('AD' Series) 4 M / 2 M (Half/Full channel)

State: 400 MHz

Standard ('A' Series) 256 K
Deep ('AD' Series) 1 M

Transitional Timing: 400 MHz

Standard ('A' Series) 256 K
Deep ('AD' Series) 1 M

136 Channels

1690A

102 Channels

1691A

68 Channels

1692A

34 Channels

1693A

1690AD

1691AD

1692AD

1693AD

Pattern Generator Analysis Tools

Description	3rd Party Vendor
WaveFormer Pro WaveFormer Pro can read the waveform files produced by Agilent's logic analyzers into its timing diagram editing and simulation environment. Users can document the captured waveforms or generate simulation stimulus files in VHDL, Verilog, SPICE, ABEL and other waveform formats. Simulation supports continuous setup and hold checking on captured waveforms. WaveFormer Pro can also produce stimulus for the Agilent 16720A Pattern Generators.	SynaptiCAD
VeriLogger Pro VeriLogger Pro is a full featured Verilog simulator with an integrated waveform viewer which supports Agilent Logic Analyzers and Agilent Pattern Generators. Agilent waveform files can be combined directly with simulation models. The project environment supports multiple Agilent waveform files and provides waveform comparison.	SynaptiCAD
TestBENCHer Pro TestBENCHer Pro is a VHDL/Verilog test bench and bus-functional model generator. It can take several Agilent logic analyzer waveform files and combine them to produce reactive bus-functional models of the system under test. Supports waveform comparison, continuous setup and hold checking, and spot sample checking.	SynaptiCAD

Third Party Contact Information

The following companies provide products that complement Agilent Technologies' logic analyzers. Agilent works closely with these companies to insure quality products, but the third party is ultimately responsible for functionality, pre-sales support, post-sales support and warranty. For companies listed below with a "resell code," their products are also available from Agilent's Corporate Price List. For resale products, the third party is still responsible for functionality, pre-sales support, post-sales support, and warranty.

(For additional US and International Sales Offices, check the web site of the specific Channel Partner.)

ALD (Premier Channel Partner)

Resell Code: ALO-xxxxx

Advanced Logical Design, Inc.
12280 Saratoga-Sunnyvale Rd. Suite 201
Saratoga, CA 95070
Phone: 408-446-1004
Fax: 408-446-1079
Email: info@ald.com
<http://www.ald.com>

Aptix

Aptix Corporation
1249 Innsbruck Drive
Sunnyvale, CA 94089
Phone: 408-541-4700
Fax: 408-541-4800
Email: info@aptix.com
<http://www.aptix.com>

ARM

ARM Inc.
750 University Ave. Suite 150
Los Gatos, CA 95032
Phone: 408-579-2200
Fax: 408-579-1205
Email: info@arm.com
<http://www.arm.com>

CORELIS (Premier Channel Partner)

Resell Code: CRL-xxxx

Corelis, Inc.
12607 Hiddencreek Way
Cerritos, CA 90703
Phone: 562-926-6727
Fax: 562-404-6196
Email: sales@corelis.com
<http://www.corelis.com>

ET

Emulation Technology, Inc.
2344 Walsh Ave., - Bldg F
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Fax: 408-982-0664
Email: et@emulation.com
<http://www.emulation.com>

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1681 Route des Dolines
06560 Sophia Antipolis
France
Phone: 33+(0) 4 97 15 2000
Fax: 33+(0) 4 97 15 2001
Email: info@europe-technologies.com
<http://www.europe-technologies.com>

Future Plus (Premier Channel Partner)

Resell Code: FSI-xxxxx

Future Plus Systems Corporation
6455 N. Union Blvd. Suite 202
Colorado Springs, CO 80918-5844
Phone: 719-278-3540 ext. 10
Fax: 719-278-9586
Email: sales@futureplus.com
<http://www.futureplus.com>

Ironwood

Ironwood Electronics, Inc.
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Phone: 800-404-0204 or 651-452-8100
Fax: 651-452-8400
Email: info@ironwoodelectronics.com
<http://www.ironwoodelectronics.com>

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1500 East Ninth Street
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Phone: 800-490-2361
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SynaptiCAD

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Phone: 800-804-7073 or 540-953-3390
Fax: 540-953-3078
Email: sales@syncad.com
<http://www.syncad.com>

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(fax) 800 820 2816

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(fax) (81) 426 56 7840

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